

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Currently amended) A data transferring apparatus, comprising:

a ring bus which circularly transfers data by holding in a slot to one direction; and

a plurality of nodes which are connected to said ring bus, wherein each of said plurality of nodes includes:

a detector which detects whether or not data destined for a self-node is held in a slot arrived to another node connected to an upstream side of the self-node; and

a controller which captures the data destined for the self-node from said slot when said detector detects presence of the data destined for the self-node and said slot arrives to the self-node, wherein said controller controls validation of said slot arrived at the self-node in a same cycle as capturing said data destined for the self-node.

2. (Currently amended) ~~[[The]]~~ A data transferring apparatus according to claim 1, comprising:

a ring bus which circularly transfers data by holding in a slot to one direction; and

a plurality of nodes which are connected to said ring bus, wherein each of said plurality of nodes includes:

a detector which detects whether or not data destined for a self-node is held in a slot arrived to another node connected to an upstream side of the self-node; and

a controller which captures the data destined for the self-node from said slot when said detector detects presence of the data destined for the self-node and said slot arrives to the self-node, wherein said controller, when not maintaining write data to be transferred, invalidates said arrived slot after capturing the data destined for the self-node.

3. (Currently amended) The data transferring apparatus according to claim ~~[[1]]~~ 2, wherein said controller, when not maintaining write data to be transferred, invalidates said arrived slot after capturing the data destined for the self-node, and

wherein said controller, when maintaining the write data, sends out the write data to said ring bus to transfer the write data by holding in said arrived slot after capturing the data destined for the self-node.

4. (Currently amended) The data transferring apparatus according to ~~claims~~ claim 3, wherein said detector includes:

an ID line which circularly transfers an ID signal indicative of a destination of the write data in synchronization with the transfer of the write data; and

a valid line which circularly transfers a valid signal indicative of presence of the write data on said ring bus in synchronization with the transfer of the write data, and

wherein when the ID signal arrived to said other node indicates the self-node as the destination and the valid signal arrived to said other node indicates presence of the write data, said detector detects presence of the write data destined for the self-node.

5. (Original) The data transferring apparatus according to claim 4, wherein said controller, when maintaining the write data to be transferred to a downstream node on an adjacent downstream side of the self-node, directly sends out the valid signal and the ID signal to said downstream node.

6. (Currently amended) The data transferring apparatus according to ~~claims~~ claim 3, wherein said detector includes:

a valid line assigned for the self-node, wherein a valid signal indicative of the presence of the write data on said ring bus is circularly transferred on said valid line in synchronization with the transfer of the write data, and

wherein when the valid signal arrived to said other node indicates presence of the write data, said detector detects presence of the write data destined for the self-node.

7. (Currently amended) The data transferring apparatus according to claim 6, wherein said controller, when maintaining the write data to be transferred to ~~[[an]]~~ a downstream node on ~~[[a]]~~ an adjacent downstream side of the self-node, directly sends out the valid signal to the downstream node.
8. (Currently amended) A data transferring method, comprising:
- providing a plurality of nodes connected to a ring bus which circularly transfers data by holding in a slot to one direction;
 - detecting whether or not data destined for a self-node is held in a slot arrived to another node connected to an upstream side of the self-node; ~~[[and]]~~
 - capturing the data destined for the self-node from said slot when presence of the data destined for the self-node is detected in said detecting step and said slot arrives to the self-node; and
 - controlling validation of said slot arrived at the self-node in a same cycle as capturing the data destined for the self-node.

9. (Currently amended) ~~[[The]]~~ A data transferring method according to claim 8, comprising:
providing a plurality of nodes connected to a ring bus which circularly transfers
data by holding in a slot to one direction;
detecting whether or not data destined for a self-node is held in a slot arrived to
another node connected to an upstream side of the self-node; and
capturing the data destined for the self-node from said slot when presence of the
data destined for the self-node is detected in said detecting step and said slot arrives to the
self-node, wherein said capturing step, when write data to be transferred is not
maintained, invalidates said arrived slot after capturing the data destined for the self-
node.
10. (Currently amended) The data transferring method according to claim ~~[[8]]~~ 9, ~~wherein said~~
~~capturing step, when write data to be transferred is not maintained, invalidates said~~
~~arrived slot after capturing the data destined for the self node, and~~
wherein said capturing step, when the write data is maintained, sends out the write
data to said ring bus to transfer the write data by holding in said arrived slot after
capturing the data destined for the self-node.

11. (Original) The data transferring method according to claim 10, wherein said detecting step includes:

circularly transferring an ID signal indicative of a destination of the write data in synchronization with the transfer of the write data; and

circularly transferring a valid signal indicative of the presence of the write data on said ring bus in synchronization with the transfer of the write data, and

wherein when the ID signal arrived to said other node indicates the self-node as the destination and the valid signal arrived to said other node indicates presence of the write data, said detecting step detects presence of the write data destined for the self-node.

12. (Original) The data transferring method according to claim 11, wherein said capturing step, when the write data to be transferred to a downstream node on an adjacent downstream side of the self-node is maintained, directly sends out the valid signal and the ID signal to said downstream node.

13. (Original) The data transferring method according to claim 10, wherein said detecting step includes:

assigning a valid signal for the self-node,

circularly transferring the valid signal indicative of the presence of the write data on said ring bus in synchronization with the transfer of the write data, and

wherein the valid signal arrived to said other node indicates presence of the write data, said detecting step detects presence of the write data destined for the self-node.

14. (Original) The data transferring method according to claim 13, wherein said capturing step, when the write data to be transferred to a downstream node on an adjacent downstream side of the self-node is maintained, directly sends out the valid signal and the ID signal to said downstream node.